552, 901

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/013200 A1

(51) International Patent Classification[7]: G06T 9/00, G06F 12/00

(21) International Application Number: PCT/CA2004/001507

(22) International Filing Date: 26 July 2004 (26.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2,436,312 1 August 2003 (01.08.2003) CA

(71) Applicant and
(72) Inventor: PETERSON, Perry [CA/CA]; 13 Windsor Street, Kingston, Ontario K7M 4K4 (CA).

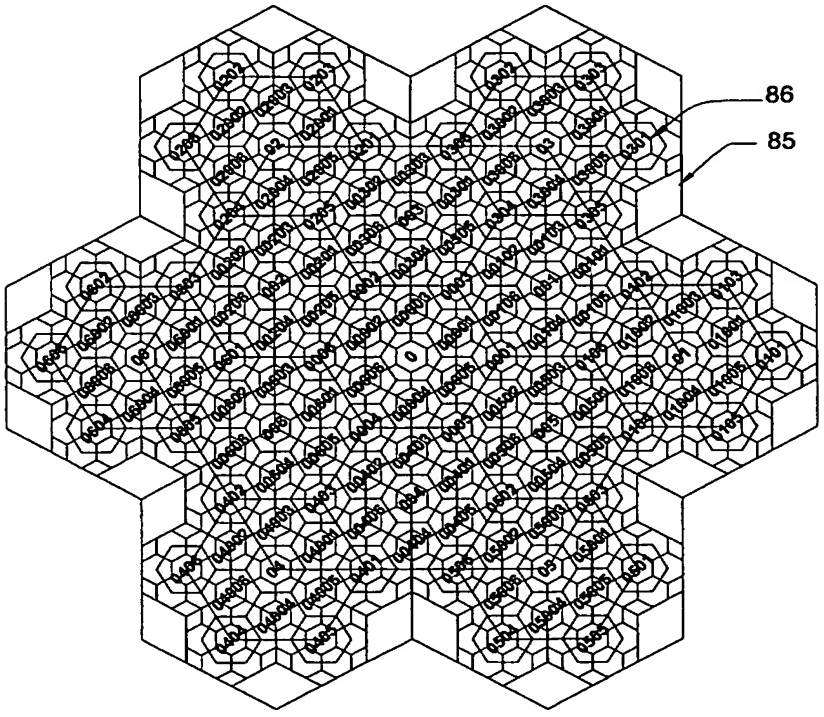
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CLOSE-PACKED, UNIFORMLY ADJACENT, MULTIRESOLUTIONAL, OVERLAPPING SPATIAL DATA ORDERING



(57) Abstract: A method, apparatus, system and data structure is disclosed for mapping of spatial data to linear indexing for efficient computational storage, retrieval, integration, transmission, visual display, analysis, fusion, and modeling. These inventions are based on plane space being decomposed into uniform discrete closely packed (hexagonal) cell areas (85). Each resolution of closely packed cells can be further divided into congruent but denser clusters of closely packed cells. The spatial indexing (86) is applied in such a manner as to build a relationship with the spatially close cells of any resolution.

WO 2005/013200 A1